

SENSENICH PROPELLER MANUFACTURING COMPANY, INC.

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SERVICE BULLETIN #R-15A October 4, 1989

TO: SENSENICH DISTRIBUTORS, FAA APPROVED REPAIR STATIONS, AFFECTED AIRCRAFT OWNERS

SUBJECT: INSPECTION OF PROPELLER BLADE AREAS FOR CORROSION- ALL SENSENICH FIXED PITCH METAL PROPELLERS

COMPLIANCE DATE: AT ANNUAL OR 100 HR. INSPECTION

DISCUSSION: Corrosion of aluminum propeller blade surfaces occurs at varying rates, depending on the condition of the protective finish and on atmospheric conditions prevalent in the aircraft basing area. It may appear as a white powder on the blade surface or, in later stages, as tiny black specks or cavities extending inward from the surface of the metal. The mechanical effect of corrosion damage is similar to that of sharp-bottom impact damage, adversely affecting propeller airworthiness. Particular concern is that older propellers, still finished with anodize and clear wear-coat finish, do not have the corrosion retarding capability of modern **ALODINE** treatment and polyurethane finish. However, flaked or blistered paint also may indicate existing corrosion.

REQUIRED ACTION:

- A. Carefully remove all flaked or blistered paint from propeller surface, taking care not to scratch the aluminum surface. Inspect propeller blades for corrosion. Propeller blades that show less than 6 square inches of total corrosion (*an area the size of a folded dollar bill*) must be repaired in accordance with the following instructions:
1. Sand the area with 220 wet-or-dry abrasive paper until all evidence of corrosion is removed.
 2. Polish the area with 320 grit (or finer) to remove all scratches.
 3. Clean the area thoroughly, apply an approved penetrant, and inspect with a 10X glass. **NOTE:** It is extremely important that all corrosion be completely removed. If cavities reappear during penetrant inspection, the repair operation must be repeated.
 4. Remove penetrant from affected area with M.E.K.
 5. Apply ALODINE or equivalent treatment in accordance with manufacturer's instructions (*proper ALODINE treatment will leave a smooth amber/gold tint on the aluminum surface after the ALODINE solution has been rinsed off*).

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6. Apply a primer over the repaired area. Note that some primers are intended for pretreated aluminum, while others are not - and may result in loss of adhesion of the outer coat.
 7. Spray area with matching paint to better protect against corrosion.
- B. If blades show greater than 6 square inches of corrosion, the propeller must be returned to an approved FAA-Propeller Repair Station for reconditioning.
- C. The recommended flight-time between reconditioning of SENSENICH fixed-pitch metal propellers is 1000 Hours, PROVIDED IT HAS NOT RECEIVED PRIOR DAMAGE REQUIRING IMMEDIATE ATTENTION. This removes fatigued surface metal and the accumulation of small nicks and cuts. The SENSENICH SERVICE MEMO dated April 8, 1970 is superseded by this recommendation.

Refer to the **SENSENICH METAL PROPELLER REPAIR MANUAL (SCRM 478)** and **AC 20-37D** for further information